

Date: Wednesday, 25/03/2009 10:36:17 AM  
 User: Chantal Lavoie

## Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services			Drawing Name	: DECAL		
Job Number	: 46687			Part Number	: 41232 200 008 001		
Estimate Number	: 12763			Drawing Number	: 41232-200-008 REV IR		
P.O. Number	:			Project Number	: N/A		
This Issue	: 25/03/2009	S.O. No.	:	Drawing Revision	: IR		
Prsht Rev.	: NC			Material	:		
First Issue	: / /	Type	: PURCHASED PARTS	Due Date	: 01/04/2009 Qty: 20 Um: Each		
Previous Run	: 31780						
Written By	:						
Checked & Approved By	: CLo9/03/25 JLM						
Comment	: Est Rev.A New Issue 07-03-01 JLM						

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :	
1.0	PG	PURCHASING	
		 <b>Comment:</b> PURCHASING Issue P/O: <u>8453</u> <span style="float: right;">CLo9/03/25</span> Fabricate as per Dwg 41232-200-008 Possible Supplier: Studio Lettrage Material release note is required	
2.0	PACKAGING 1	PACKAGING RESOURCE #1	
		 <b>Comment:</b> PACKAGING RESOURCE #1 Receive & Inspect For Transit Damage Ensure material certification is attached <span style="float: right;">88 09/04/01</span>	
3.0	QC5	INSPECT WORK TO CURRENT STEP	
		 <b>Comment:</b> INSPECT WORK TO CURRENT STEP <span style="float: right;">S 09/04/12</span>	
4.0	PACKAGING 1	PACKAGING RESOURCE #1	
		 <b>Comment:</b> PACKAGING RESOURCE #1 Identify and Stock Location: _____ <span style="float: right;">P 09/04/12 01C</span>	
5.0	QC21	FINAL INSPECTION/W/O RELEASE	
		 <b>Comment:</b> FINAL INSPECTION/W/O RELEASE <span style="float: right;">09/06/12 78</span>	
Job Completion			
 <span style="float: right;">MF 09-06-12</span>			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DATE 8/27/04	<b>ENGINEERING ORDER</b>		E.O. No. A-1	SHT. 1 OF 1
BY D. NELSON	TITLE  <b>DECAL</b>		DWG. AFFECTED 41232-200-008	
APPROVED BY			SHEET AFFECTED SHT 1	

REASON FOR CHANGE: CHANGED MARKING OF -001 DECAL FROM "P/N 41232-200-001-001/002" TO "P/N 41232-200-001-001"; ADDED -002 DECAL.

MINOR CHANGE - FAR 21.95

IS



-001 DECAL

WAS



-001 DECAL

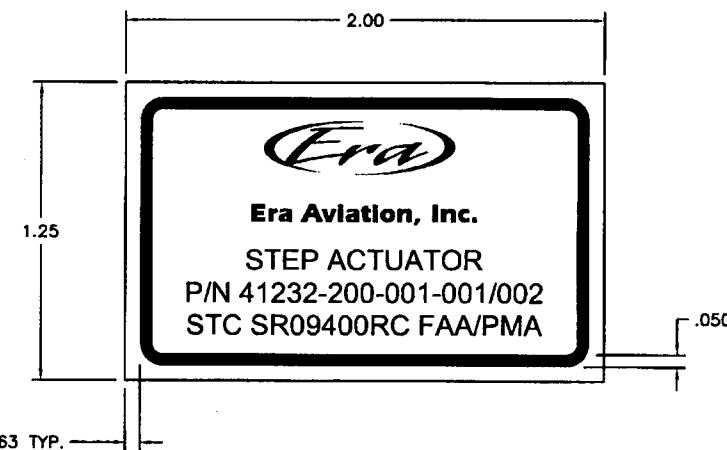
ADD



*41232-200-001-002*

-002 DECAL

CHANGE REQUIRED:	DATE:	BY:	YES	NO
TRAVELER				
INSTALLATION INSTRUCTIONS				
MAINTENANCE INSTRUCTIONS				
ILLUSTRATED PARTS				
UNINCORPORATED DRAWING LIST				
MASTER DRAWING LIST				
COMPUTER DATA BASE				



-001 DECAL  
RED LETTERS & MARKINGS ON WHITE BACKGROUND

466837

				-001	DECAL	220 SCOTCHCAL FILM 3M, AVCAL, LAFAYETTE, LA.				
NO. REQ'D PER ASSY				PART NO.	NAME	STOCK SIZE	MATERIAL	MATL.SPEC	ZONE	
LIST OF MATERIAL										REV.
PROPRIETARY RIGHTS NOTICE										
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-001	2	41232-200-001								
DRAW. NO.	REVISION NO.	NEXT ASSEMBLY			REL.	HEAT TREAT	SCALE	NONE	REV.	
						FINISH			41232-200-008	IR



## PRODUCT DATA BULLETIN

Product Data Bulletin: A5-O

### Avery Graphics™ A5 Opaque 5-year INTERMEDIATE calendered vinyl film

Dated: 10/3/02

#### Description:

Avery Graphics™ A5 Opaque intermediate films are flexible, high-gloss calendered vinyls designed for use on computer sign cutting equipment. This construction provides excellent cutting, weeding and transferring characteristics for signage applications.

Application information can be found in the Avery Graphics Application Guide.

For surface preparation, converting and printing, and application and removal instructions, please refer to the Avery Graphics Instructional Bulletin.

#### Construction:

- Face Film: 3.2 mils opaque medium gloss intermediate calendered vinyl film
- Adhesive: 1.0 mil clear acrylic permanent solvent pressure-sensitive adhesive
- Liner: 78# bleached white kraft

#### Physical Properties:

The following information on physical and chemical characteristics is based upon tests believed to be reliable. The values are intended only as a source of information. They are given without guarantee and do not constitute a warranty. The purchaser should independently determine, prior to use, the suitability of this material for his/her specific purpose. (Data represents averages and is not intended for use as a specification).

- Outdoor durability: 5 years when properly processed and applied (vertical exposure, unprinted film)\*\*
- Application surface contours: Flat and simple curves
- Minimum surface and air application temperature: +50° F (10° C)
- Service Temperature Range: -40° F to +180° F (-40° C to 82° C) (Reasonable range of temperatures which would be expected under normal environmental time and temperature conditions)
- Typical Chemical Resistance: Resistant to most mild acids, alkalis and salt solutions. See instructional bulletin for recommendations on cleaning.
- Shelf Life: One year when stored at the following temperatures and humidity conditions: 68°-77° F (20° - 25° C) and 50±5% R. H.

- Typical Adhesion Values: **180° Peels**

Substrate	24 hrs	1 week
Stainless Steel	4.4 lbs/in	5.1 lbs/in
Glass	4.7 lbs/in	5.3 lbs/in

NOTE: Tested per ASTMD 1000. Always pre-test your specific substrate prior to actual application.

- Reflectivity: NA
- Typical Gloss\*: 70 at 60°



## Product Bulletin 8522

Release F, Effective January 2003

Black bar in margin indicates a change

# Scotchcal™ Opaque Imaging Media 8522

## Description

This media is specially formulated to dry quickly after printing. Production of outdoor weatherable and long-term indoor durable graphics is now easier than ever. Its changeable adhesive allows easy removal for up to one year.

### Advantages

- Optimized for use with selected Epson Stylus Pro printers and Epson Archival inks.
- Optimized for use with selected HP DesignJet Printers and HP DesignJet Ink System UV or HP83UV Color Ink System
- For making opaque, laminated graphics that are outdoor weatherable and long-term indoor durable
- Media:
  - For opaque (reflective) graphics
  - Changeable, easy to remove from warranted substrates up to 1 year later
  - Dries quickly after printing so the overlaminates can be applied almost immediately
  - Low slippage paper liner for superior tiling
- Overlaminates:
  - Provide additional UV (ultraviolet) and physical protection for making weatherable finished graphics
  - Available in luster and matte gloss
  - Adhesive allows for heat-assisted or cold-temperature lamination

### Applications and Uses

3M™ Scotchcal™ Changeable Opaque Imaging Media 8522 is intended only for ink jet printing and for use with the listed Compatible Products and Equipment and the following applications. Any other application is NOT warranted by 3M or covered by the worldwide 3M™ MCS™ Warranty unless 3M gives its prior written approval for the application.

- First surface images (the image is on top of the film) for opaque posters and signs, including:
  - Graphics for vans, personal vehicles, trucks and buses
  - Novelty posters
  - Retail and point-of-purchase displays
  - Information graphics such as maps and directories
  - Entertainment promotions in museums, zoos, parks, theatres, sports venues
  - Education and presentation graphics

- Legal and courtroom exhibits

- For flat or simple curved surfaces, with or without rivets, used in vertical ( $\pm 10^\circ$ ) applications

### Limitations of End Uses

The following uses and applications are specifically NOT warranted.

- Fleet applications in areas that use salt for winter road maintenance
- Application to non-warranted substrates, including wall-board
- Applications subjected to gasoline vapors or spills
- Application to corrugated or highly irregular surfaces or sharply raised areas
- Graphics applied to stainless steel, including stainless steel vehicles
- On flat surfaces with rivets, tenting of 4 to 10 mm around rivets may be expected; rivets may be cut around to eliminate tenting.

Note: Standard ink jet technology is water based. Water-based chemistry is susceptible to the extremes of heat and humidity. This is a factor in most product constructions on the market. Read the Fabrication, Shelf Life and Storage sections in this bulletin. Staying in the middle of these ranges always provides optimum performance.

## Compatible Products and Equipment

### Thermal Ink Jet Printing Systems

- Epson Stylus Pro 9500, Stylus Pro 10000 printer
  - Epson Archival Inks
- Epson Stylus Pro 10600 printer
  - Epson Archival Inks
- HP DesignJet Printers 2000 and 3000 series
  - HP DesignJet Ink System UV (pigment-based ink)
- HP DesignJet Printers 5000 series
  - HP83UV Color Ink System

### Overlaminates (required)

- 3M™ Luster Overlaminate 8519 (semi-gloss)
- 3M™ Matte Overlaminate 8520

Note: For the full product names of the 3M products listed on this page, please see page 1.

### Warranted Substrates

Media 8522 is warranted for use on the following rigid substrates.

Some substrates may "out-gas", resulting in tiny bubbles throughout the surface of the graphic. For maximum performance, be sure the substrate you select is properly cleaned and prepared as recommended by the manufacturer. See Instruction Bulletin 5.1 for additional information.

- Alodine (anodized aluminum)
- Automotive panels (automotive painted steel)
- Fruehauf (painted aluminum)
- FRP (fiberglass reinforced plywood)
- Glass
- Imron® (polyurethane-painted metal panel)
- Acrylic
- Sintra™ board

### Test and Approve Non-warranted Substrates Before Use

Media 8522 is not warranted for any substrate other than those listed above. If you want to use it for other substrates, 3M recommends that you test and approve the media for both adhesion and removal characteristics.

### Characteristics

Characteristic	Description
Media	7 mil, white, opaque graphic film
Liner	Low-slippage, lay flat paper
Adhesive	Changeable, pressure sensitive
Thickness (media and adhesive)	7.5 to 8 mil (nominal)
Application substrates	See Warranted Substrates, above
Application surfaces	Flat or simple curved surfaces, with or without rivets, used in vertical ( $\pm 10^\circ$ ) applications (no corrugations)
Application temperature range	28° to 110°F (-2° to 43°C) (air and surface)
Roll sizes	36" x 45 feet (914 mm x 13.5 m) 54" x 45 feet (1372 mm x 13.5 m)

## How to Become a 3M Ink Jet Registered Fabricator

Only 3M Thermal Ink Jet Registered Fabricators are eligible to offer 3M MCS warranted graphics. In order to become certified, a fabricator must complete the requirements as specified in the 3M Ink Jet Graphics Registered Fabricator Reference Manual located on the 3M website at [www.scotchprint.com](http://www.scotchprint.com)

### Effective Performance Life

To obtain the warranty given below, the graphics must be made according to 3M's recommendations which are detailed in the **Warranty and Limited Remedies** on page 3. Also see the section, **Removability**.

### Warranted Durability

Media 8522 with Overlaminate 8519 or 8520	Epson Printers		HP Printers	
	Outdoor	Indoor	Outdoor	Indoor
Applied to Warranted Substrates	2 years	5 years	3 years	5 years

### Removability

Imaging media 8522 is removable from warranted substrates for 1 year without the aid of chemical strippers or accessories. Refer to Instruction Bulletin 4.23 for additional information.

### Fabrication

Graphics must be made according to 3M's recommendations which are detailed in the **Warranty and Limited Remedies** on page 3.

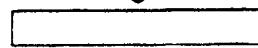
See Instruction Bulletin 4.23 for detailed fabrication, printing and mounting information.

### Graphic Construction Options

#### Opaque (Reflective) Graphics

Opaque graphics made with imaging media 8522 require an overlaminate and an opaque substrate.

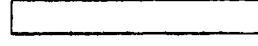
##### Viewer/Light Source



Overlaminate 8519, 8520  
Adhesive on bottom



Imaging Media 8522  
Image on top; adhesive on bottom



Opaque Substrate